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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,123	02/19/2004	Frank John Marszalkowski JR.	M2010-7129	1227
30623	7590	12/29/2004	EXAMINER	
MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C. ONE FINANCIAL CENTER BOSTON, MA 02111			NGUYEN, ANTHONY H	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,123

Applicant(s)

MARSZALKOWSKI, FRANK JOHN

Examiner

Anthony H Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-12 and 14 is/are rejected.
- 7) ☐ Claim(s) 6 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02/19/2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3,7-11 and 14 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Rossmeisl et al. (US 6,324,973) in view of Reber et al. (US 5,491,871).

With respect to claim 1, Rossmeisl et al. teaches an apparatus 10 for forming a pattern on a substrate having a frame 12, a dispenser 100 which dispenses a material onto the substrate 26 through a stencil 16 and a controller 14 (Rossmeisl et al., Fig.1) which controls dispensing of the material on the substrate. Reber et al. does not clearly teach the wiper which removes material from the stencil as the stencil is moved away from the substrate. Reber et al. teaches the wiper 26 which removes material under the stencil 20 as the stencil is moved away from the substrate 18 as shown in Figs.2 and 3 of Reber et al. In view of the teaching of Reber et al., it would have been obvious to one of ordinary skill in the art to modify the apparatus of Rossmeisl et al. by providing the wiper as taught by Reber et al. to improve the efficiency of cleaning the stencil during printing onto the substrate. With respect to claims 2,3 and 7-10, the wiper and the printing station 14 is fixed on the slide 10 so that the wiper is positioned below the stencil 20 and the stencil is moved toward or away from the substrate for printing as shown in Figs 1 and 2 of Reber et al. With respect to claims 11 and 14, the combination of Rossmeisl et al. and Reber et

al. renders obvious the steps of transporting the substrate into a position for printing, aligning the substrate and a stencil via pins 28, depositing the material on the substrate 26 (Rossmeisl et al., col.6, lines 4-11) and translating the stencil from a position over the substage over the fixed wiper position for cleaning.

Claims 4,5 and 12 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Rossmeisl et al. in view of Reber et al. as applied to claim 1-3,7-11 and 14 above, and further in view of Takahashi et al. (US 2001/0017086).

With respect to claims 4 and 12, Rossmeisl et al. and Reber et al. teach all that is claimed, except the inspecting probe coupled to the second gantry system for inspecting a surface of the substrate. Takahashi et al. teaches the visual camera or inspecting probe 107 (Takahashi et al., Figs. 4A and 4B) for inspecting the surface of the board 102. In view of the teaching of Takahashi et al., it would have been obvious to one of ordinary skill in the art to modify the apparatus of Rossmeisl et al. and Reber et al. by providing the inspecting probe as taught by Takahashi et al. for optimizing the print quality. With respect to claim 5, the use of an inspecting probe which is movable is well known in the art and involves no apparent unobviousness.

Allowable Subject Matter

Claims 6 and 13 are allowable but objected to as depending from the rejected claims. These claims if properly rewritten in independent form and would be allowable.

Claim 15 is allowable.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach the stencil which translates over the fixed wiper substantially simultaneously with the inspecting of the electronic substrate (claims 6) or the steps

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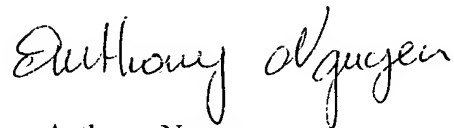
of inspecting the substrate and translating the stencil from a position over the substrate so that the steps occur substantially simultaneously (claims 13 and 15).

Conclusion

The patents to Tourigny, Tan et al., Aun et al. and Homma et al. are cited to show other structures having obvious similarities to the claimed structure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Nguyen whose telephone number is (571) 272-2169. The examiner can normally be reached daily from 9 AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld, can be reached on (571) 272-2168. The fax phone number for this Group is (703) 872-9306.



Anthony Nguyen
12/27/04
Patent Examiner
Technology Center 2800